

Abstract of the Disclosure

An integrated solar concentrator and tracker is constructed from a beam deflector for unpolarized light in combination with a fixed optical condenser. The one-dimensional beam deflector consists of a pair of prism arrays made from a material whose refractive index can be varied by applying an electric field. Two of the one-dimensional concentrators can be arranged with their faces in contact and with their prism arrays perpendicular to construct a two-dimensional beam deflector. The intensity and distribution of an applied field modifies the refractive index of the individual prisms in order to keep direction of the deflected beam fixed as the incident beam shifts. When the beam deflector is used with the fixed concentrator the result is that the position of the focus remains fixed as the source moves.